Q) Define a subclass of exception (which is, of course, a subclass)

WAP that demonstrate handling of exception in inheritance tree. Create base class father & subclass son which extends base class. In fathers class implement a constructor which takes age & throws exception wrong age when input age is less than 0. In sons class implement constructor that uses both fathers & sons age & throws an exception if son ≥ father age

```
class Father {
        String name ;
```

class

```
import.java.util.scanner;
class Negative AgeError extends Exception {
int a;
public NegativeAgeError (int a) {
this.a = a;
 }
 public string to string () {
  return "Negative Age :"+ a;
 }
 }
class InvalidAgeError extends Exeption {
inta, b;
public InvalidAgeError (inta, int b) {
  this.a = a;
  this.b = b; }
 public string tostring () {
       return "Invalid Age :"+ a + "is not less than "+b;
     }
    }
class Father {
 string name;
  int Age;
  Father (string name, intage) {
       try {
          if (age & < 0) {
             throw new NegativeAgeError (age);
             }
             this.name = name;
             this.age = age;
             }
             catch (NegelaiveAgeErrore) {
               this.age = 20;
               System.out.println(e);
          } } }
```

```
class Son extends Father {
 String sonName;
 int sonAge;
 Son (String  sonName, int sonAge, String fatherName, int
        fatherAge) {
     super (fatherName, fatherAge);
     this. sonName = sonName;
     try {
       if (sonAge < 0) {
         throw new NegativAgeError(sonAge);
       }
       if ( sonAge >= this.age){
         throw new InvalidAgeError(sonAge this.age);
       }
         this.sonAge = sonAge;
         }
         Catch (NegativeAgeerror e) {
          this.sonAge = 20;
          System.out.println (e);
         }
         cathch (invalid Age Error e){
          this . sonAge =10;
          System.out.println (e)
        }
     }
    }
```

```
class Exceptions {
public staticvoid main(String [] args ){
        Scannn scanner = new scanner (system.in);

  System.out.print ("sons Name");
  String son Name1 = scanner.next Line();
  System.out.print ("son Age ");
  int son Age  =  scanner.next Int ();
  Scanner.next Line();
  System.out.printh ("Father Name");
    String father Name = scanner.next Line ();
    Scanner.next Line();

  Son a1 =  new son (son Name 1, son Age 1,
                    father Name1, fatherAge 1);

  System.out.printh ("son Name:" + a1.son Name+ ",
                 Age:" + a1.sonAge);

             Scanner.close();
             }
            }
           }
```

Output:

```
Enter sons age: 10
Enter father age: 5
 Age error
Enter sons age: -10
negative age error.
```

Seen
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